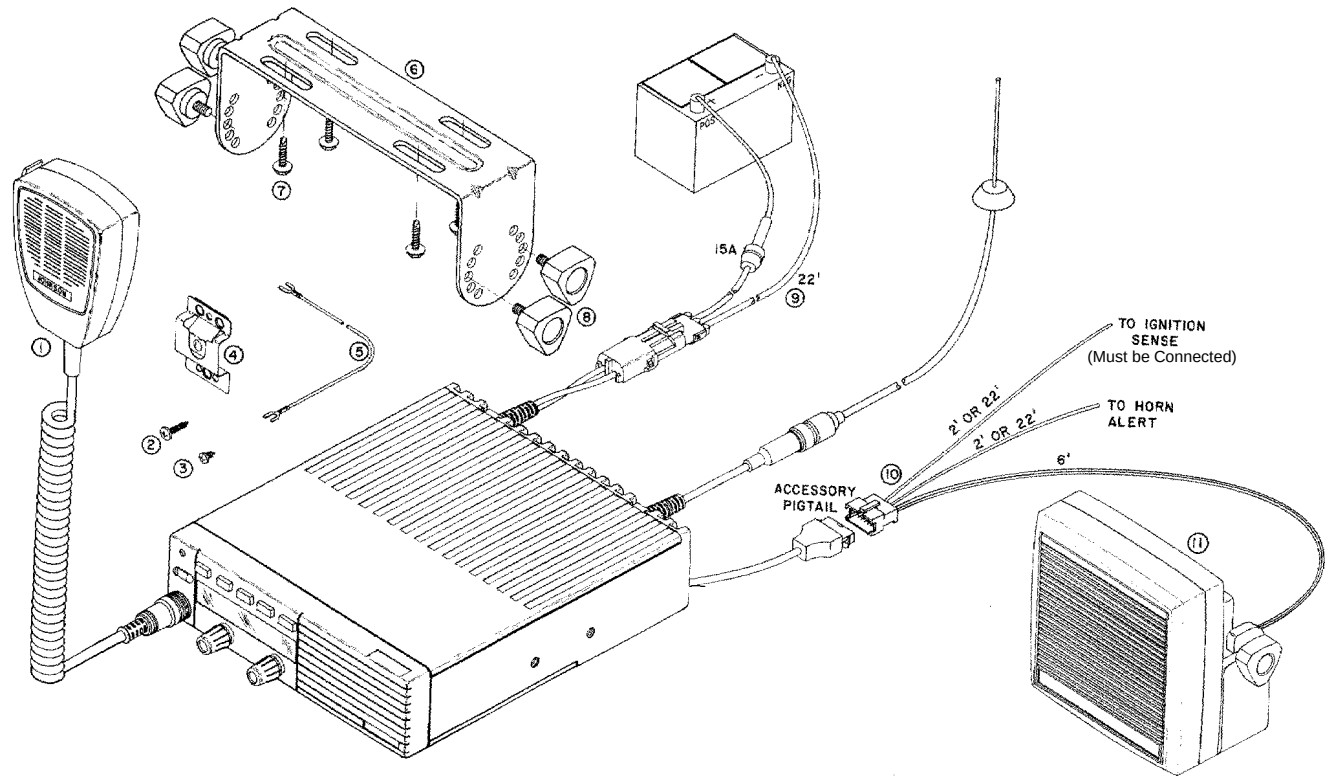
SECTION 2 INSTALLATION



Item No.	Description	Part No.	Item No.	Description	Part No.
1	Amplified dynamic mic	250-0740-310	7	Self-drilling screw (4)	575-9077-565
2	Screw, 4-20 x 5/8” thread frmg (3)	575-5604-020	8	Knob (4)	547-0016-003
3	Screw, 4-24 x 1/4” sheet metal (3)	575-3604-008	9	Power cable (22') and hardware	023-9750-010
4	Microphone hanger clip	023-3514-001	10	Accessory wire and hardware	023-9750-011
5	Mic hanger ground wire	023-7171-911	11	5" remote speaker	250-0151-006
6	Transceiver mounting bracket	017-2226-034	---	Butt splice connector (2)	586-9008-061

Figure 2-1 Front Mount Installation Components

2.1 GENERAL

2.1.1 SCOPE OF INSTRUCTIONS

Since each installation is somewhat unique, the following installation instructions are intended only as a general guide to installing this transceiver. Described are the intended use of the mounting hardware and the electrical connections that should be made.

2.1.2 PERFORMANCE TESTS

Although each transceiver is carefully aligned and tested at the factory, shipment can alter these settings or damage the transceiver. Therefore, it is good practice to check transceiver performance before it is placed in service.

2.1.3 TRANSCEIVER PROGRAMMING

The transceiver needs to be programmed before it is placed in service unless it was ordered as factory programmed. Programming instructions are located in Section 4. Transceivers not factory programmed are shipped programmed with test channels and other factory test parameters.

2.1.4 POWER SOURCE

NOTE: The ignition sense line must be connected as described in Section 2.4.3 for power up to occur.

This transceiver is designed for installation only in vehicles which have a 12-volt, negative ground electrical system. This type of electrical system has the negative battery terminal connected directly to the vehicle chassis. Other types of electrical systems require a voltage converter.

2.2 TRANSCEIVER INSTALLATION (FRONT AND REMOTE MOUNT)

2.2.1 MOUNTING CONFIGURATIONS

Models of this transceiver are available for the following installation configurations:

Front Mount - The control unit is part of the transceiver, so the transceiver must be installed within reach of the operator.

Remote Mount - The control unit is a separate assembly which can be installed up to 17 feet from the transceiver which has a blank front panel (see Figure 2-2).

Dual Control - The remote control unit is connected to a front-mount transceiver. This allows the transceiver to be controlled from both the transceiver front panel and the remote control unit. The displays on the transceiver and control unit indicate identical information.

2.2.2 SELECTING A MOUNTING LOCATION

Front-mount transceivers are designed for mounting in a location near the operator such as the dash, console, or transmission hump. Remote-mount transceivers are designed for mounting in an out-of-the-way location such as the trunk.

WARNING

The mounting location of the transceiver or control unit can affect safe operation of the vehicle. Follow these precautions when installing this transceiver:

- Mount it where it does not interfere with operation of the vehicle controls.
- Mount it where the operator can easily see the display and reach the controls.
- Mount it where it is least likely to cause additional injury in case of an accident.
- Air bags deploy with great force. Therefore, do not mount a transceiver or control unit anywhere near the deployment area or place any other objects in the deployment area.

2.2.3 MOUNTING KITS

The following kits may be used to install this transceiver. Components in these kits are shown in Figures 2-1, 2-2, and 2-5.

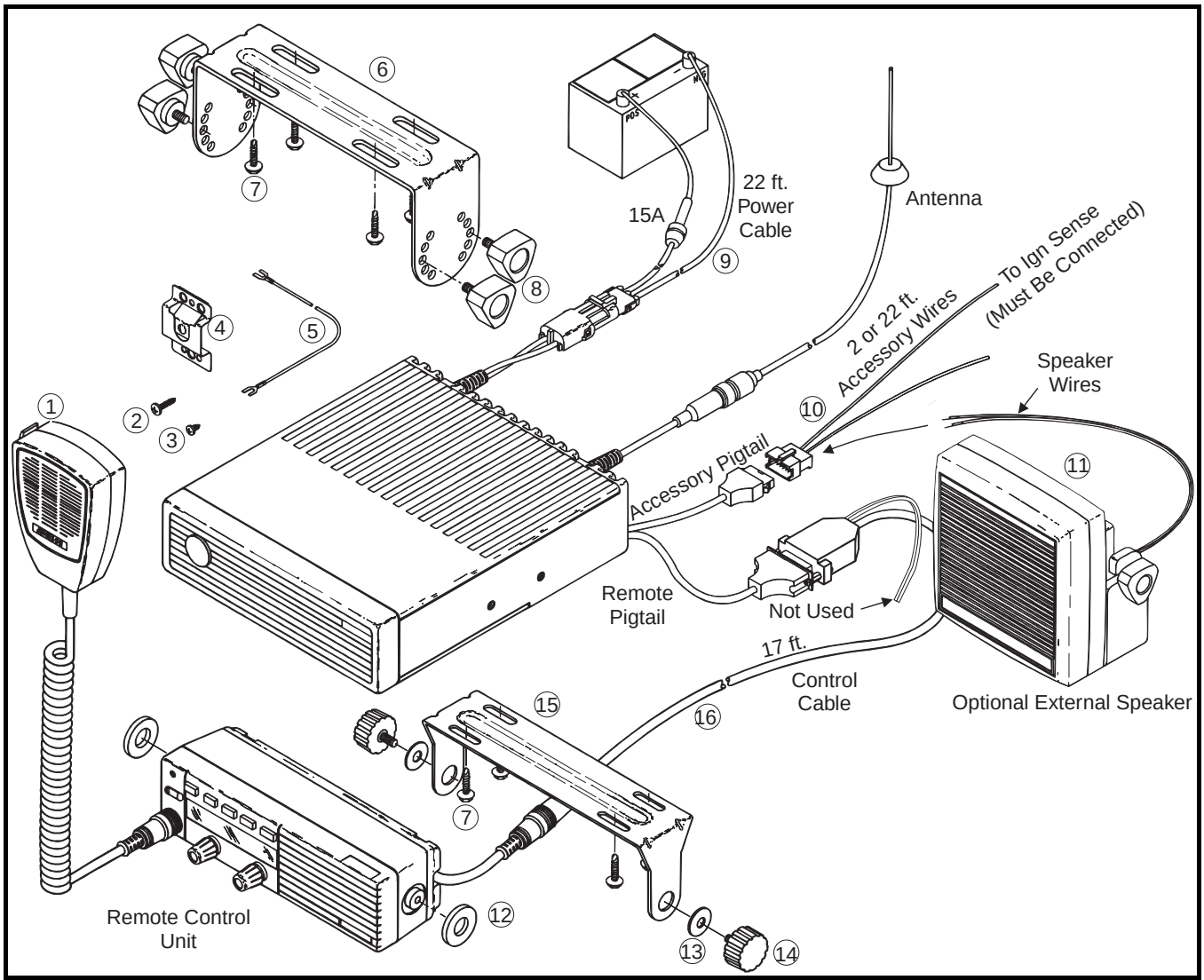
Std Cable and Hardware Kit, Part No. 023-9750-010
Includes a 22-foot power cable, microphone hanger and ground wire, splice connectors, and all the hardware (such as screws) that is normally required for installation.

100W Cable and Hardware Kit, P.N. 023-5315-110
Includes a heavy-duty 20-foot power cable, microphone hanger and ground wire, and all hardware (such as screws) that is normally required for installation.

Std Transceiver Mounting Kit, Part No. 023-9750-012
Includes a transceiver mounting bracket, four knobs, and mounting screws.

100W Transceiver Mounting Bracket, Part No. 017-9700-007.
A mounting bracket designed for the 100W transceiver with extended heat sink.

Accessory Wire Kit, Part No. 023-9750-011
Includes a wire assembly that is used to connect the ignition sense input and accessories.



Item No.	Description	Part No.	Item No.	Description	Part No.
1	Amplified dynamic microphone	250-0740-310	8	Knob, transceiver (4)	547-0016-003
2	Screw, 4-20 x 5/8” thread formg (3)	575-5604-020	9	Power cable (22 ft.) and hardware	023-9750-010
3	Screw, 4-24 x 1/4” sheet metal (3)	575-3604-008	10	Accessory wire and hardware	023-9750-011
4	Microphone hanger clip	023-3514-001	11	5” 15W 3.2-ohm external speaker	250-0151-006
5	Mic hanger ground wire	023-7171-911	12	Plastic washer (2)	596-6400-015
6	Transceiver mounting bracket	017-2226-050	13	Stainless steel spring washer (2)	596-9260-001
7	Self drilling screw, 1.25” long		14	Knob, control unit (2)	032-0792-015
	Transceiver 1/4”	575-9077-565	15	Control unit mounting bracket	017-2226-050
	Control unit #10	575-9077-545	16	Control cable, 17 ft.	597-2002-262

Figure 2-2 Standard Remote Mount Installation Components

2.2.4 MOUNTING STANDARD TRANSCEIVER

Proceed as follows to mount a standard power front or remote mount transceiver:

1. Check the area underneath the selected mounting area for wiring, brake and gas lines, or other components that could be damaged when the mounting bracket is installed. Then install the mounting bracket using the included self-drilling screws or other screws if desired.

2. Install the transceiver in the bracket using the included knobs.

3. With front-mount transceivers, install the microphone hanger in a convenient location using the screws for sheet metal or plastic. The hanger must be connected to chassis ground for proper operation of functions such as monitoring and scan. If required, ground the hanger using the included ground wire.

Figure 2-3 100W Transceiver Mounting Bracket

2.2.5 MOUNTING 100W TRANSCEIVER

The 100-watt transceiver mounting bracket (Part No. 017-9700-007) can be installed on the bottom side of the transceiver only, because the mounting holes are offset. Therefore, it is not intended for applications where it must be above the transceiver such as such as dash mounting. Refer to Figure 2-3 and proceed as follows to mount a 100W front or remote mount transceiver:

1. Check the area underneath the selected mounting area for wiring, brake and gas lines, or other components that could be damaged when the mounting bracket is installed. Then install the mounting bracket using the included self-drilling screws or other screws if desired.

2. Mount the transceiver in the mounting bracket using the screws shown in Figure 2-3.

3. If applicable, install the microphone hanger as described in the preceding section.

2.3 POWER CABLE INSTALLATION

2.3.1 ALL EXCEPT 100W MODELS

NOTE: Both leads of the power cable should be connected directly to the vehicle battery. Connection to other points may result in increased interference from the vehicle’s electrical system.

Refer to Figures 2-1 or 2-2 and proceed as follows:

1. Disconnect the negative cable from the battery to prevent damage from accidental short circuits.

2. Route the red and blue power cables to the battery. If there is excess cable, cut it off at a convenient location and then splice it using the included butt splice connectors. You may also need to cut the cable if it must be routed through the firewall and there is no opening large enough to clear the fuseholder. If a hole is drilled in the firewall, be sure to seal it when the installation is complete.

3. Connect the red power cable to the positive (+) terminal of the battery. To minimize the chance of a short circuit occurring in the unfused portion of the cable, make sure that there is a minimum length of cable between the fuseholder and positive terminal.

4. Connect the blue cable to the negative (–) battery terminal.

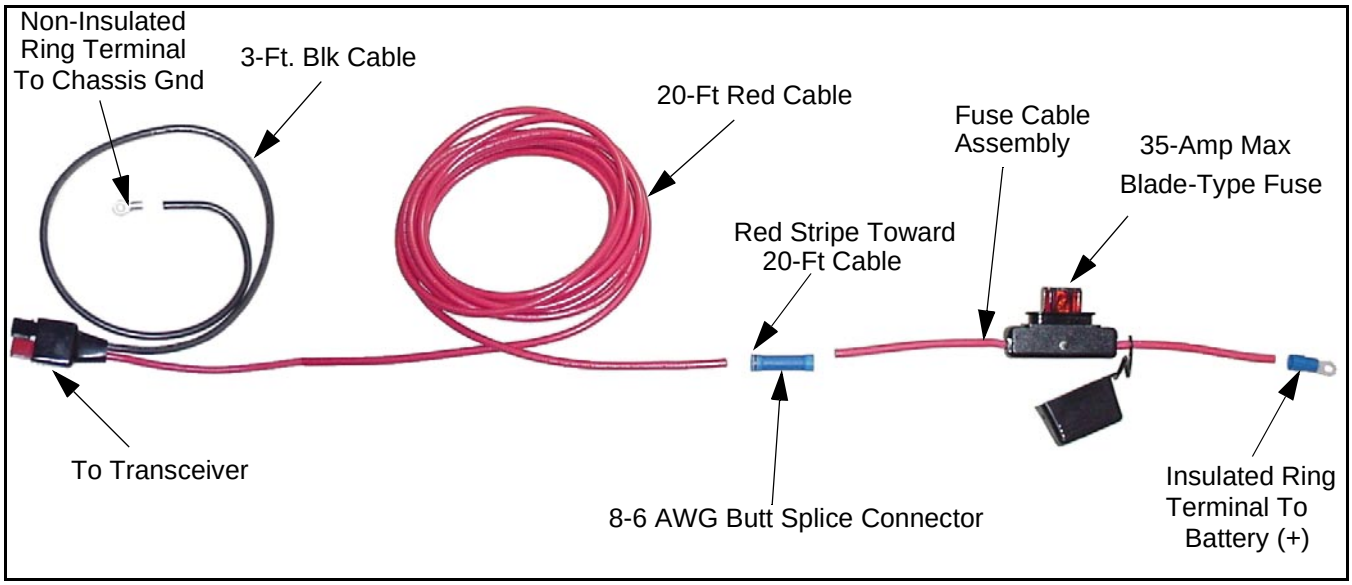


Figure 2-4 100W Transceiver Power Cable Components

5. Plug the power cable into the transceiver and reconnect the negative battery cable.

6. Install the antenna according to the manufacturer's instructions. The transceiver has an "N" connector. Check VSWR. Reflected power should be less than 4% of forward power (VSWR less than 1.5 to 1).

2.3.2 100W MODELS

NOTE: The red power cable lead should be connected directly to the vehicle battery. Connection to other points may result in increased interference from the vehicle's electrical system.

Refer to Figure 2-4 and proceed as follows:

1. Disconnect the negative cable from the battery to prevent damage from accidental short circuits.

2. Route the red power cable to the battery. If a hole is drilled in the firewall, be sure to seal it when the installation is complete.

3. Locate the included fuse cable and strip 1/2" of insulation from each end. Attach the included insulated ring terminal to an end using a suitable crimping tool. Attach this ring terminal to the positive (+) battery terminal.

4. Cut the red power cable from the transceiver to length and strip 1/2" of insulation from the end.

5. Connect this cable to the fuse cable using the included 8-6 AWG butt splice connector and a suitable crimping tool. Make sure that the end with the red ring is toward the transceiver cable as shown in Figure 2-4 (the power cable is 8 AWG and the fuse cable 6 AWG).

6. The 3-foot black cable at the transceiver end is connected to the chassis. Locate a bolt or other chassis member that provides a good ground point and then clean the area to ensure good contact. Then attach it using the included uninsulated ring terminal. Make sure there is a good return through the chassis to the negative battery terminal.

7. Plug the power cable into the transceiver and reconnect the negative battery cable.

8. Install the antenna according to the manufacturer's instructions. The transceiver has an "N" connector. Check VSWR. Reflected power should be less than 4% of forward power (VSWR less than 1.5 to 1).

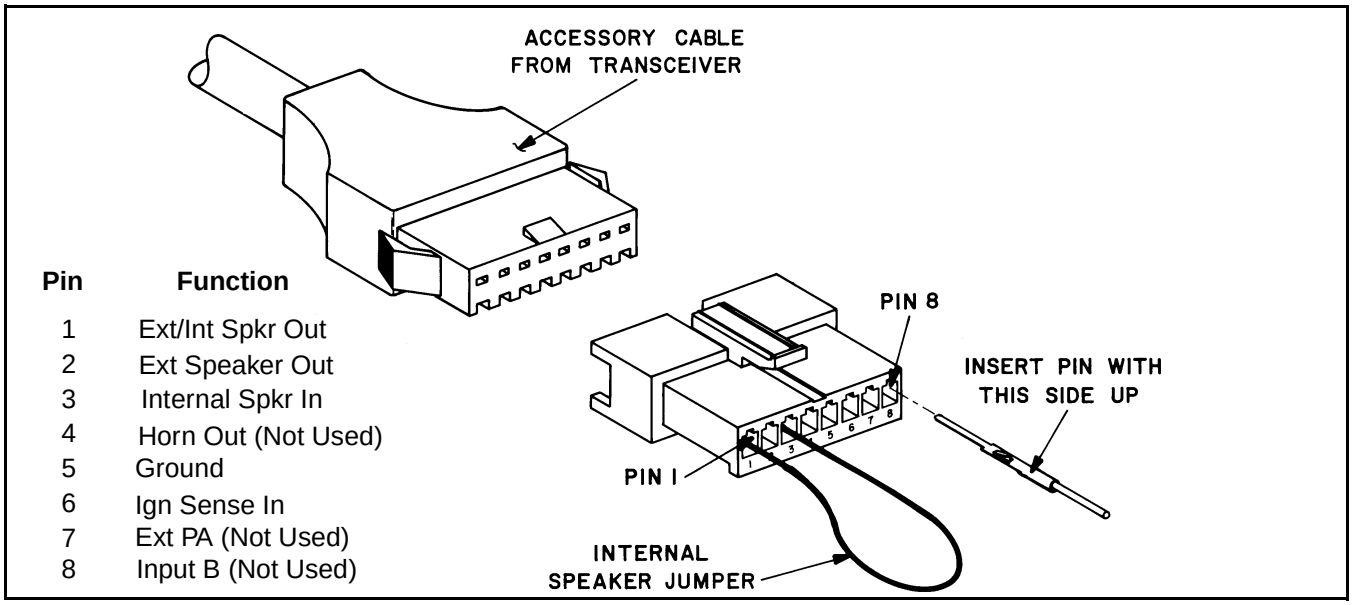


Figure 2-5 Accessory Jack

2.4 ACCESSORY CABLE INSTALLATION

NOTE: The ignition sense input must be connected for the transceiver to power up. In addition, if an external speaker or remote control unit is not used, the speaker jumper must be installed to route audio to the internal speaker.

2.4.1 GENERAL

Accessory Cable Kit, Part No. 023-9750-011, is standard with this transceiver. The cable in this kit is used for connecting the ignition sense input and the external speaker accessory to the pigtail cable coming from the back of the transceiver.

Two 8-pin connectors are included. One has a jumper installed from pin 1 to 3 for routing audio back into the internal speaker (see next Section 2.6) and the other does not have any wires installed. Also included are two 22-foot and three 2-foot wires with attached pins that can be used as required. Refer to Figure 2-5 and install this cable as described in the following information.

2.4.2 SPEAKER

Refer to Section 2.6 for speaker installation information.

2.4.3 IGNITION SENSE

NOTE: As previously described, the ignition sense line must be connected to a switched or unswitched power source for the transceiver to power up.

This ignition sense line is pin 6 of the accessory connector, and it is connected using an included wire assembly. When the ignition sense input is connected to a source switched by the vehicle ignition switch, it provides the following functions.

1. Power automatically turns on and off with the ignition switch.

2. A turn-off delay can be programmed (see Section 3) which may prevent accidental discharge of the vehicle battery if the transceiver is left on for extended periods (1 or 2 days). Standby current is approximately 600 mA.

   If these features are not used and transceiver power is to be controlled by the front-panel power switch only, the ignition sense input can be connected to an unswitched source.

2.4.4 HORN ALERT

NOTE: The horn alert feature is currently not available.

To utilize the horn alert (when available), the horn alert output of the accessory cable is connected to the external alert, and a Horn option switch and cadence must be selected by programming. Refer to Section 3.14 of the operating manual and the programming manual in Section 4 for more information.

When the horn alert sounds, pin 4 of the accessory connector goes low. The disabled condition is a high impedance state. Maximum sink current of the horn alert output is approximately 1.0 ampere. Therefore, some type of driver circuit is usually required.

If a relay is used, a diode should be connected across the relay coil with the cathode toward the battery side. This protects Q6 on the logic board from the voltage spike produced when the relay de-energizes.

The horn alert is connected using one of the wires included in the accessory wire kit. Insert the pin of the wire assembly into the pin 4 slot of the connector as shown in Figure 2-5. Then connect the other end to the horn alert driver.

2.4.5 EXTERNAL PA

This output is not used. An external public address is not currently supported.

2.4.6 INPUT B

This input is not used. An external emergency switch is not currently supported.

2.5 REMOTE CONTROL UNIT INSTALLATION

NOTE: Refer to Section 2.9 for handheld control unit installation information.

2.5.1 ACCESSING SWITCHES AND JUMPERS

There are DIP switches and possibly jumpers on the display controller board of the remote control unit that may need to be changed to configure the control unit.

There are two different display controller boards that have been used. Beginning in late 2001, a revised display controller board starting shipping. This board utilizes only DIP switches for programming. The earlier unrevised board it replaced used both DIP switches and jumpers. The new revised board is shown in Figure 2-6 and the earlier unrevised board is shown in Figure 2-7. Compare the part layout of your board to these illustrations to determine which board you have.

The jumpers on these boards are configured as described in the following information and in Table 2-1. If the default configuration must be changed, the display controller board is accessed as follows:

1. Remove the back cover of the remote control unit. The audio PA board is then the top board, followed by the display controller board, and then the display board.

2. To temporarily move the audio PA board out of the way, release it from the housing by pressing the two plastic clips on the bottom edge. The display controller board is then exposed.

2.5.2 SETTING MASTER/SLAVE SWITCHES

Switches 8 and 9 of DIP switch S1 on the display controller board (see Figure 2-6 or 2-7) set the master/slave configuration of the control unit as follows. This switches function the same on both boards. Set these switches as indicated in Table 2-1.

Master = Sw 8 Off, Sw 9 On (default)
Slave = Sw 8 On, Sw 9 Off

2.5.3 CONFIGURING VOLUME CONTROL

The speaker volume control configuration is set by DIP switches S1-2, S1-3, and S1-10 (revised controller board, Figure 2-6) or by jumper resistors R756, R758, and R759 (unrevised controller board, Figure 2-7). These jumpers set the speaker volume control configuration as follows. Set these jumpers as indicated in Table 2-1.

3. **Mode A (S1-2/S1-3 On, S1-10 Off)** - This mode is always selected with front mount radios. It provides

Table 2-1 Control Unit DIP Switch and Jumper Settings

Configuration	DIP S1 Settings		Jumper Settings [3]		
	Sw 8	Sw 9	S1-2 (R756)	S1-3 (R758)	S1-10 (R759)
Front mount transceiver only	Off*	On*	On *	On *	Off *
Remote control unit, single control					
Standard internal speaker used	Off*	On*	Off *	On *	Off *
Optional external speaker used	Off*	On*	On	On	Off
Dual control, standard configuration [1]					
Front mount transceiver control unit	Off*	On*	On *	On *	Off *
Remote control unit	On	Off	Off	On *	Off *
Dual control, alternate configuration [2]					
Front mount transceiver control unit	On	Off	On *	On *	Off *
Remote control unit	Off*	On*	Off *	On *	Off *
Handheld control unit	On	Off	N/A	N/A	N/A

* - Default setting, no change required.
[1] The volume of each internal speaker is controlled independently by the local volume control. If an external speaker is used, it is controlled by the front mount transceiver.
[2] This configuration allows an external speaker to be controlled by the remote control unit. However, both internal speakers and the volume control of the front mount transceiver are then inactive.
[3] With the revised display controller board only (Figure 2-6), set using DIP switches S1-2, 3, and 10. With the unrevised display controller board, set using jumper resistors R756/R758/R759 ("On" = Jumper In; "Off" = Jumper Out).

digital volume control of the internal speaker or an external speaker connected to the accessory cable (see Section 2.6).

Mode B (S1-2/S1-10 Off, S1-3 On) - This is the default mode for the remote control unit. It provides analog volume control of the internal speaker in the remote control unit. This speaker is driven by a separate audio amplifier in the remote control unit.

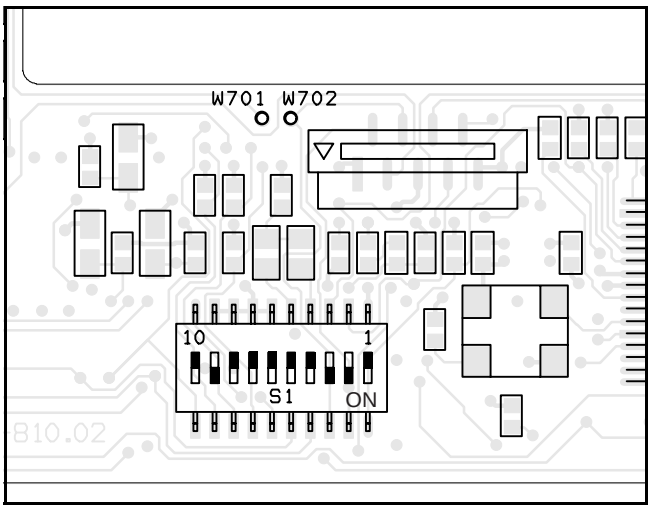


Figure 2-6 Revised Display Controller Board DIP Switch

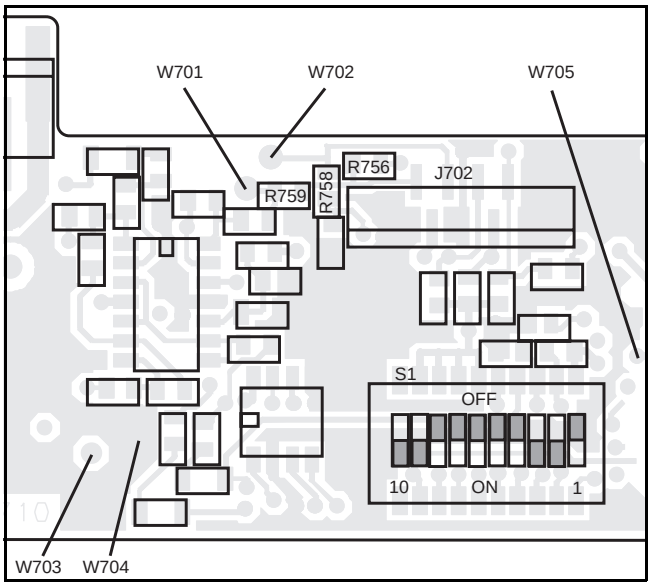


Figure 2-7 Unrevised Display Controller Board Jumpers

2.5.4 MOUNTING REMOTE CONTROL UNIT

A diagram showing a remote transceiver installation is located in Figure 2-2. The control unit mounting bracket, 17-foot control cable, and mounting hardware are included. Proceed as follows:

1. Check the area behind the selected mounting location to make sure that there is nothing that will be damaged when the mounting screws are installed. Then install the mounting bracket using the included self-drilling screws or others if desired.

2. Install the control unit in the bracket using the included plastic washers, spring washers, and knobs as shown in Figure 2-2.

3. Install the microphone hanger in a convenient location using the included screws for sheet metal or plastic as applicable. The hanger must be connected to chassis ground for proper operation of functions-such as monitoring and scan. If required, ground the hanger using the included grounding wire.

4. Route the control cable from the transceiver to the control unit and plug it into both as shown in Figure 2-2.

2.5.5 EXTERNAL PUBLIC ADDRESS

The speaker signal is routed to pin 7 of the accessory connector. This output can be used for external accessories such as a public address system. Use one of the included accessory cable wire assemblies to connect this output.

2.6 CONNECTING THE SPEAKER

2.6.1 USING STANDARD INTERNAL SPEAKER

CAUTION

The audio amplifier in the transceiver is designed to withstand momentary grounding of the speaker outputs. However, do not connect either speaker output to supply voltage because serious damage will result.

Front Mount Transceiver - Insert the plug with the jumper from pin 1 to 3 into the accessory jack (see Figure 2-5). This routes the audio on pin 1 back in to the internal speaker connected to pin 3. The other internal speaker terminal is internally connected to pin 2.

Remote Control Unit - In the standard configuration, the internal speaker in the control unit is used, and no special connections are required. Low level audio from the control cable is routed to a 3-watt audio amplifier in the control unit. The use of a separate amplifier permits independent volume control in dual control applications and also minimizes noise.

NOTE: The two wires on the transceiver end of the control cable are not used in this application, so they should remain unconnected.

2.6.2 USING AN OPTIONAL EXTERNAL SPEAKER

If an optional external speaker is used, it should be a 4-ohm, 15-watt speaker such Part No. 250-0151-006 shown in Figure 2-1 or 2-2. Proceed as follows to connect this speaker:

1. The external speaker is connected to pins 1 and 2 of the accessory connector shown in Figure 2-5 (the order is not important).
   If installing the -006 speaker, pins are already installed on the speaker wires. Locate the connector included in the accessory wire kit that does not have pins 1 and 3 jumpered and insert one pin into the pin 1 location and the other into the pin 2 location.

2. If installing some other speaker, use the 2- or 22-foot wire assemblies included in the accessory wire kit as required.

NOTE: In dual control applications, this speaker can be controlled by either the transceiver or remote control unit. Refer to Table 2-1 for information on how to set up the control unit for each configuration.

2.7 KEY CAP INSTALLATION

Key Cap Kit, Part No. 587-5300-001, is included with each transceiver. This kit includes keys labeled as follows and six plugs that can be inserted in the front panel if keys are not used. The caps indicated by an asterisk (*) are installed at the factory.

EMER*	**BKLHT***	**DISP***	**SEL SQ***	**SCAN***
TONES*	**C/S**	**TG SEL**	**TX PWR**	**CALL**
MON	**RWS**	**PRI ED**	**ALERT**	**RESP**
MSG	**PHONE**	**STATUS**	**RTA**	**HOME**
SCN ED	**PROG**	**SEARCH**	**LOCK**	**F1**
F2	**F3**	**F4**	**F5**	**F6**

NOTE: RTA, HOME, and the caps in the last two rows are not included in early versions of this kit.

Determine the function of each key and then install the applicable key cap. To remove a key cap, gently pull it out of the front panel with a wide-nose pliers or use the extraction tool included in the DC power cable kit. This kit is for the standard front or remote control unit only. The handheld control unit key caps cannot be changed.

2.8 TRANSCEIVER MOUNTING TRAY INSTALLATION

2.8.1 DESCRIPTION

Optional Transceiver Locking Tray, Part No. 585-7000-185, is a lockable mounting bracket for 5300 and other transceivers that use the standard chassis (it is not intended for 100W models with the extended chassis). This bracket provides theft protection and also allows the transceiver to be quickly removed from the vehicle with a key.

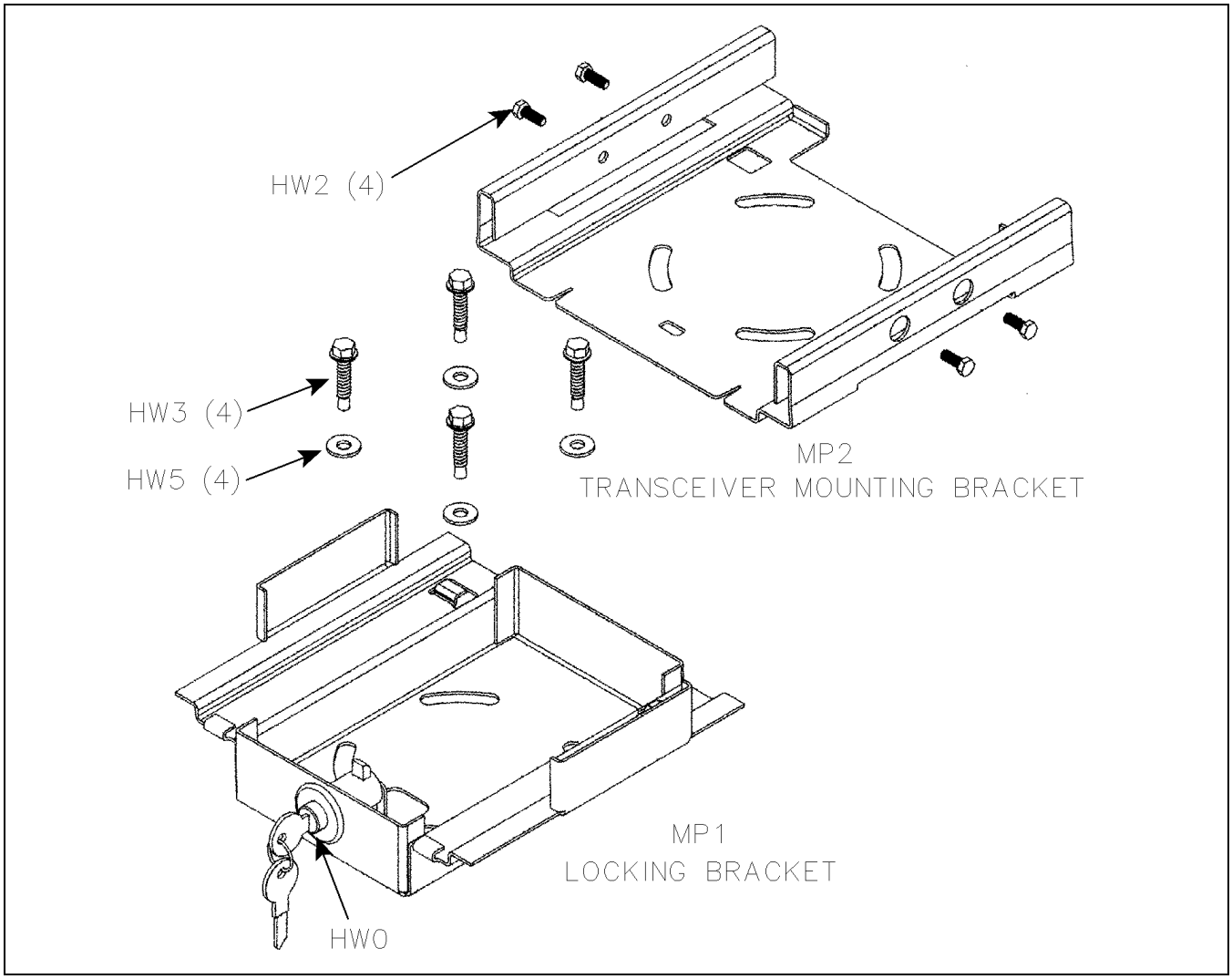


Figure 2-8 Locking Tray Installation Diagram

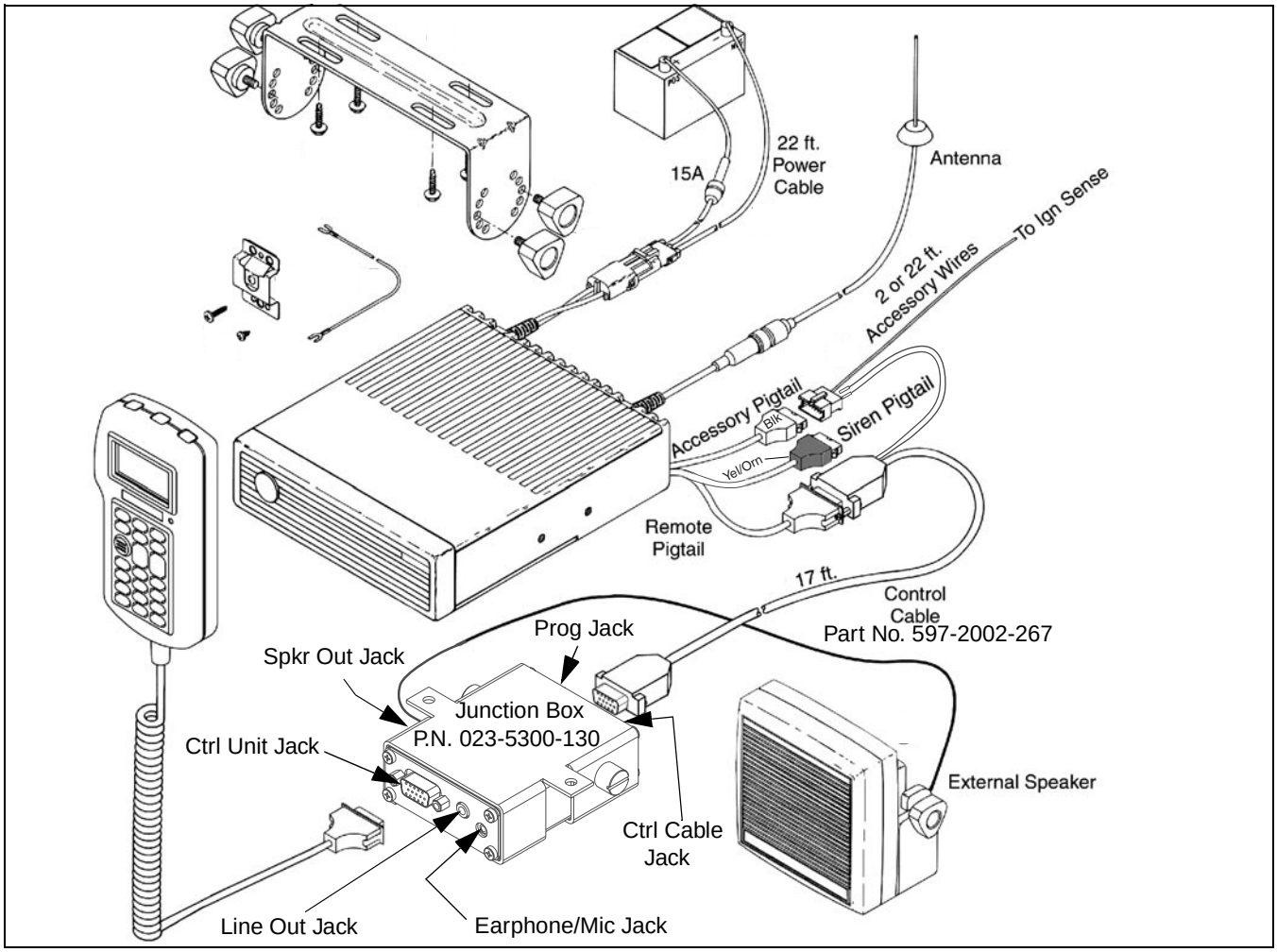


Figure 2-9 HHC Installation Components (Optional Junction Box Used)

2.8.2 INSTALLATION

Refer to Figure 2-8 and proceed as follows:

1. Install the transceiver in bracket MP2 using the four 10-32 x 1/2" screws (HW2) included. If desired, this mounting bracket can be used to mount the transceiver directly to the vehicle.

2. Install lock bracket MP1 using the four self-drilling screws (HW3) and washers (HW5) included. Make sure that there is nothing under the mounting location that will be damaged.

2.8.3 LOCKING AND UNLOCKING TRANSCEIVER

To insert the transceiver with attached mounting bracket into the locking bracket, set it over the locking bracket and push it rearward slightly if necessary so that it seats. Then pull it forward until it latches.

The lock operates in a manner similar to most glove compartment locks. To release the transceiver, press the button and at the same time push the transceiver rearward. The key locks the button so that it cannot be pressed.

2.9 HANDHELD CONTROL UNIT INSTALLATION

2.9.1 GENERAL

The Handheld Control Unit replaces the standard control unit and DTMF microphone in remote mount applications. It does not contain an internal speaker, so an external speaker must be used. This control unit plugs directly into the remote control unit pigtail cable

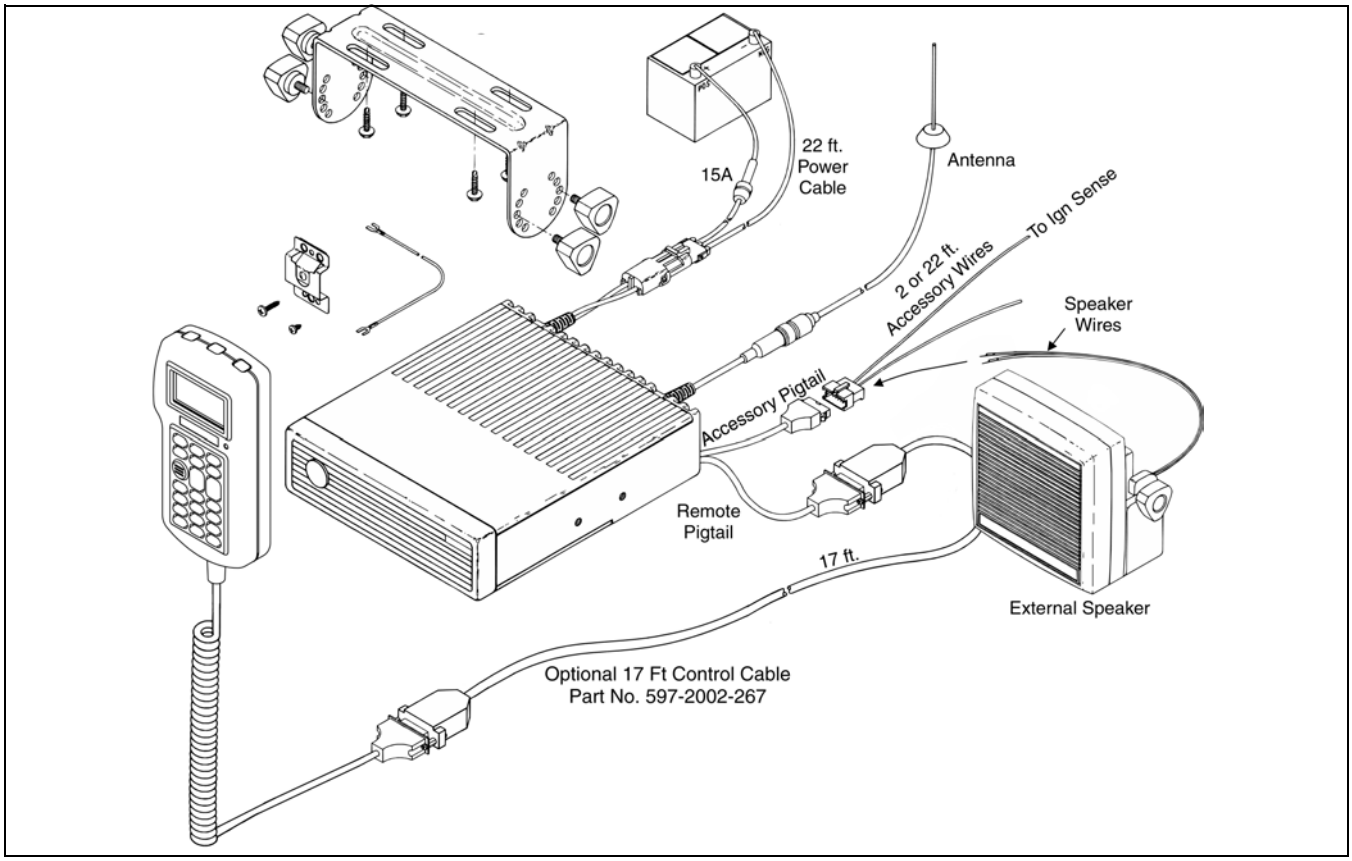


Figure 2-10 HHC Installation Components (Junction Box Not Used)

on the back of the transceiver or into an optional junction box. This junction box provides the following additional jacks (see Figure 2-9).

Speaker Out Jack - Output for connecting an external speaker. When the junction box is not used, the speaker is connected to the accessory pigtail of the transceiver.

Line Out Jack - Connection point for a tape recorder or some other device. The output signal at this jack is 1V P-P, 600-ohm (nominal), and consists of composite receive and transmit audio.

Earphone/Microphone Jack - A three-conductor jack for connecting a combination earphone and microphone. The external speaker audio is automatically muted when this jack is used. There is no PTT line associated with this jack, so the transmitter must still be keyed using the control unit PTT switch.

Programming Jack - A standard eight-pin jack for connecting the computer and RPI to program the transceiver.

NOTE: The junction box is required to program the transceiver when this control unit is used.

2.9.2 INSTALLATION INSTRUCTIONS

Optional Junction Box Used (Figure 2-9)

1. Install the transceiver as described in Sections 2.1 to 2.4. Connect the microphone hanger to chassis ground as described.

2. Mount the junction box in a convenient location near the control unit using the included mounting bracket and hardware.

3. Route the 17-ft. control cable from the transceiver to the junction box as shown in Figure 2-9. Connect it

between the remote pigtail of the transceiver and the male DB9 jack of the junction box.

4. The two wires coming from the connector on the transceiver end of the control cable route speaker audio to the junction box. Insert the pins on these wires into the pins 1 and 2 slots of the accessory cable connector. *NOTE: The accessory and siren pigtail cables have the similar connectors. Be sure to connect to the black accessory connector, not the yellow/orange siren connector.*

   If a jumper has been connected between pins 1 and 3 on the accessory connector, remove it. A speaker can also be connected directly to pins 1 and 2 if desired. Refer to Section 2.6.2 for more information.

5. Plug the 4.0-ohm external speaker into the SPKR OUT jack of the junction box. Plug the control unit into the male DB9 connector of the junction box.

6. If applicable, connect the tape recorder or other device to the LINE OUT jack.

7. Connect the earphone or earphone/microphone to the EARPHONE/MIC jack (the external speaker automatically mutes when an earphone is connected to this jack). The earphone output is the “tip” of the jack and the microphone input is the “ring” (ground is the “sleeve”).

Junction Box Not Used (Figure 2-10)

The Handheld Control Unit can be plugged directly into the remote pigtail of the transceiver in applications where the transceiver and control unit are located near each other.

In other applications where the transceiver is mounted remotely, optional 17-foot Control Cable, Part No. 597-2002-267, is required to connect the control unit to the transceiver. Proceed as follows:

1. Install the transceiver as described in Sections 2.1 to 2.4. Connect the microphone hanger to chassis ground as described.

2. Route the 17-ft. control cable from the remote pigtail of the transceiver to the control unit as shown in Figure 2-10. Secure the connectors using the captive screws.

3. Connect the external speaker to pins 1 and 2 of the accessory pigtail as described in step 4 of the preceding section.

2.9.3 USING HHC TO PROVIDE DUAL CONTROLS

General

The handheld control unit can connected to a front mount transceiver to provide dual controls. However, operation in this configuration may not be suitable because only one speaker is available for both control units.

Either the internal speaker in the front mount radio or the external speaker connected to the accessory cable (see Section 2.6) or junction box can be used. Connecting both speakers in parallel is not recommended because the audio amplifier may become overloaded.

Setting DIP Switches

In the dual control configuration, one control units must be designated as the master and the other as the slave. The master provides volume control of the speaker. Switches 8 and 9 of DIP switch S1 in both the front mount and handheld control units control the master/slave configuration as indicated in Section 2.5.2. The default setting of these switches in both is the master configuration. Set one control unit for the master configuration and the other for the slave as required for your application. The other switches should be left in the default configuration.

2.9.4 TRANSCEIVER PROGRAMMING WITH HHC

The programming setup used to program a transceiver equipped with the Handheld Control Unit is basically the same as with the standard control units. Refer to Section 4.1.4 for more information.

Only one transceiver programming parameter must be changed when the Handheld Control Unit is used. Set the “Controller Type” parameter on the Global screen of the PCConfigure programming software for “Handheld” instead of “Normal”.

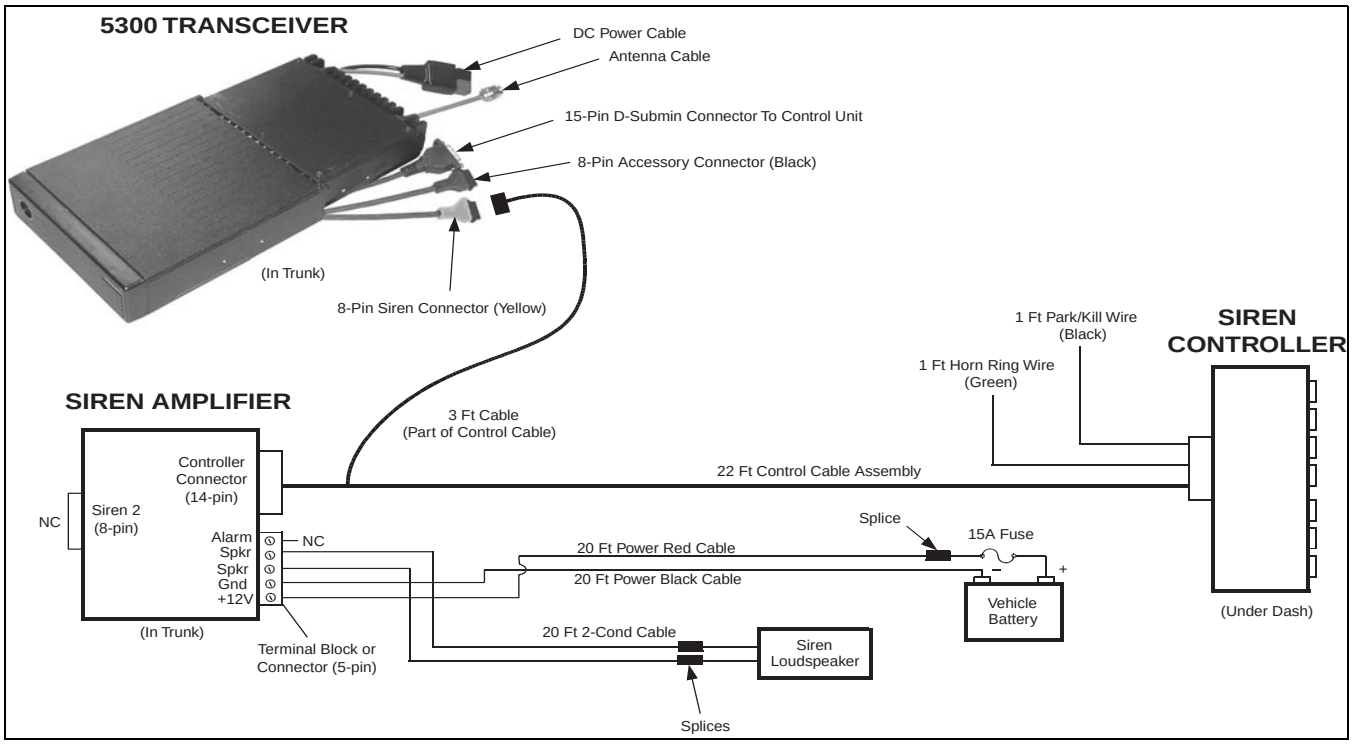


Figure 2-11 Siren Installation Diagram

There is also a DIP programming switch on the handheld controller board. The ten switches of this switch should be left in the default position which is switches 2, 3, 6, and 9 "On", and the others "Off". The only time any of these switches may need to be changed is when the HHC is used in a dual control configuration as described the preceding section.

2.10 SIREN OPTION INSTALLATION INSTRUCTIONS

2.10.1 GENERAL

The 5300 Siren Kit, Part No. 250-5300-100, contains a siren amplifier, siren controller, and all the cables and hardware normally required to install this option. This kit connects to an E.F. Johnson 5300 mobile transceiver. The siren loudspeaker is optional, and the following models are available:

Part No. 585-5300-007 - Model TS100 for lightbar installation

Part No. 585-5300-008 - Model MS100 for compact (behind grille) installation.

2.10.2 TRANSCEIVER PROGRAMMING

For proper operation of the siren controller backlight, a transceiver programming parameter may need to be changed. On the Global screen of the PCConfigure programming software (see Section 4), set the "Auxiliary B Toggle" parameter for "Backlight". The Siren Control Head backlight then turns on and off with the transceiver control unit backlight.

2.10.3 INSTALLATION PROCEDURE

Refer to Figure 2-11 and proceed as follows:

1. Mount the siren amplifier near the transceiver (the connecting cable to the transceiver is approximately 3 feet long).

2. Mount the siren controller in the desired location (the connecting cable to the amplifier is approximately 22 feet long).

3. Mount the siren loudspeaker in the desired location (the connecting cable to the amplifier is approximately 20 feet long). Refer to the installation

instructions included with the speaker for more information.

4. Connect the included 22-ft control cable assembly between the amplifier, transceiver, and controller as shown in Figure 2-11. Be sure to connect it to the yellow (or orange) 8-pin siren pigtail of the transceiver (not the black 8-pin accessory pigtail).

NOTE: It is recommended that the power cable be connected directly to the vehicle battery. Connection to other locations may result in excessive noise in the audio signal when using the PA function.

5. Connect the included fuseholder to the positive (+) battery terminal using the included ring terminal or another connector as required.

6. Connect the included red cable from the **+12V** terminal on the amplifier to the fuseholder using the included solder splice connector. This connector contains internal solder that melts when heated sufficiently.

7. Connect the included black cable from **GND** terminal on the amplifier to the negative (–) battery terminal using the included ring terminal or some other connector as required.

8. Connect the loudspeaker to the **SPEAKER** terminals on the amplifier using the included 2-conductor cable and solder splice connectors (the order is not important).

9. If the siren is to be automatically disabled when the vehicle is in Park or Neutral, connect the black wire coming from the siren controller connector to the neutral safety switch.

10. If the vehicle horn is to sound with the siren, connect the green wire coming from the siren control head connector to the vehicle horn circuit.